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“Harnessing the Power of Technology for the Warfighter”

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Battery Shelf-Life What Is It?

Tri-Service Power Expo
Norfolk, VA
15-17 July 2003

Presenter: Marvin Wilkerson

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Shelf-Life Program Objectives

- **Timely delivery of product to customer that meets user requirements**
  - **Lowest Cost**
  - **Highest Reliability**

Battery Shelf-Life Issues

- **Many different battery types, chemistries, and associated characteristics**
- **Variation in knowledge of battery characteristics within shelf-life community**
- **Differences in understanding or interpretation of shelf-life**

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Definitions

Shelf-Life **– Length of time a battery is required to last under storage conditions and remain capable of meeting mission requirements**

Service-Life **– Useful life of a battery for mission application from the time it is placed in service**

Capacity **– Ability of a battery to provide a sustained current for a given duration of time (Ah) until voltage reaches specified lower limit (cutoff voltage)**

Operating Life **– Time required for battery voltage to remain above cutoff voltage under mission loading**

Self Discharge **– Process in which battery discharges (loses capacity) due to internal chemical reactions without an external load applied**

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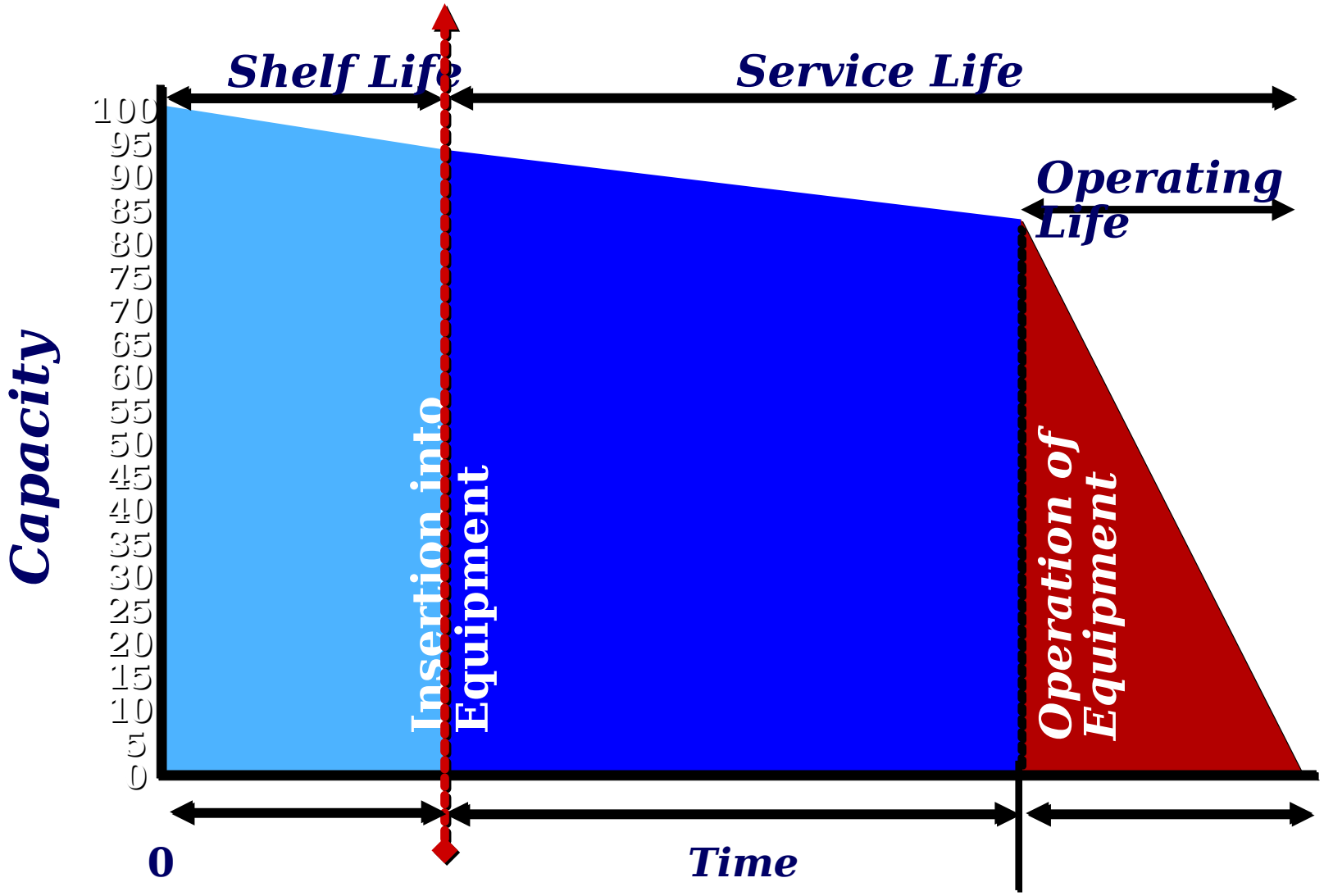
Battery Life



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Bottom Line

If items are stored (regardless of whether by acquisition activity or end user), the condition of the inventory must be understood

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Battery Shelf-Life Sub-Committee

Goals

* **Evaluate and enhance the life cycle process for batteries as it relates to shelf-life**

* **Recommend actions to resolve issues and problem identified by DoD customers**

* **Recommend procedural and process changes to enhance program management**

* **Recommend policy changes to DoD 4140.27 and other policy documents**

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Battery Shelf-Life Sub-Committee

Focus Areas

* Acquisition issues affecting shelf-life & quality

* Validate and standardize shelf-life coding in DoD

* Establish standards and procedures for disposal and returns

* Update and coordinate battery storage standards, including training at all levels

* Procedure for military unique shelf-life problems

* Battery reference material readily available to all users

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Battery Shelf-Life Sub-Committee

Focus Areas

* Standardization of batteries

* Establish and standardize testing and identify technical centers

* Standardize marking and packaging and with commercial practice where possible

* Standardize buying efforts between agencies

* Establish yearly joint services battery conference

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DOD Shelf-Life Board

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